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ABSTRACT

This final report is a product of a Preservation Planning Program (PPP) self-study conducted by the Iowa State University, working with the Association of Research Libraries' (ARL) Office of Management Studies. The PPP is designed to put self-help tools into the hands of library staff responsible for developing plans and procedures for preserving library materials. The library's collections and preservation activities are described, planning assumptions are discussed, and the reports of four preservation task forces on the organization of preservation activities, environmental conditions, physical conditions of the collections, and preservation education resources are summarized. In addition, 32 task force recommendations are presented, organized around four central goals: (1) providing a coordinated library-wide approach to preservation; (2) maintaining and extending the useful life of the collections to make them available for future use; (3) achieving and maintaining a preservationally sound physical environment; and (4) educating staff and patrons in preservation issues and proper techniques for handling library materials. Each recommendation includes a statement of implementation covering responsibility for implementation, timeframe, priority, and cost. Seven appendices include graphic representations of the overall condition, brittleness, and acidity of the collection and of environmental readings, and listings of the percent of acidity and physical characteristics of various library collections. A listing of task force members is also provided. (KM)

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EDITORS NOTES ON THIS PUBLICATION SERIES

This final report is one of ten in a series resulting from libraries conducting the OMS **Preservation Planning Program** (PPP). A two-year grant from the National Endowment for the Humanities enabled the OMS to select and work with ten Association of Research Libraries members as they conducted the **Preservation Planning Program** and served as demonstration sites for other libraries in their areas. Applications from interested libraries were screened in Fall 1984, and ten libraries were chosen to conduct PPP self-studies from 1984 to 1986.

The **Preservation Planning Program** is designed to put self-help tools into the hands of library staff responsible for developing plans and procedures for preserving library materials. A typical library takes from four to six months to complete the Program, which involves the cooperation of 25 to 30 staff members. Using a structured planning procedure, a manual, and an extensive resource notebook, library staff prepare a detailed action plan for local preservation program development for the next three to five years, with the on-site assistance of a librarian-consultant trained by the Office of Management Studies.

Most PPP final reports begin with a discussion of the background of the institution and the external factors related to the current preservation situation. Task force reports then provide details on the specific concerns and interests of the individual sites. In a final section, libraries lay out their implementation plans.

Copies of PPP final reports are available for $10.00 each, either through library distributors, or by direct order from the OMS. Prepayment is required, and reports should be ordered by complete title, including library name. OMS Publication order forms are available by writing or calling OMS, 1527 New Hampshire Ave., Washington, D.C. 20036. 202 232-8656.

The Office of Management Studies was established in 1970 by the Association of Research Libraries with financial support from the Council on Library Resources. The Office also has received funding from The Andrew W. Mellon Foundation, The General Electric Foundation, The National Endowment for the Humanities, The Lilly Endowment, inc., and the H.W. Wilson Foundation. The OMS provides self-study, training, and publication programs and services to academic libraries, to assist them with organizational and staff development and strategic planning for change.

PRESERVATION PLANNING PROGRAM

IOWA STATE UNIVERSITY LIBRARY

Final Report

Prepared for the Dean of Library Services

April 1987

by

The Preservation Planning Program
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This Preservation Planning Program study was supported by the Office of Management Studies of the Association of Research Libraries and funded by the National Endowment for the Humanities.

Executive Summary

The preservation challenge facing the nation's academic research libraries is daunting. Research collections representing immeasurable scholarly value and enormous intellectual and monetary investment are physically disintegrating; the deterioration is occurring in all libraries and often at alarming rates. The Iowa State University Library has long recognized that preservation of its collections was an important component of the ultimate service to the academic community which a university library provides, and consequently, has over the years implemented a number of preservation initiatives.

This Library was one of ten research libraries selected to serve as a demonstration site for the Association of Research Libraries' Office of Management Studies Preservation Planning Program assisted self-study. The carefully conducted study, which began in the Fall of 1985 and which is summarized in this report, utilized the basic methodology developed by ARL's Office of Management Studies. Conducted in three phases, the heart of the study was an investigative phase in which four task forces were employed to scrutinize four principal areas of concern: the physical condition of the Library's collections, the environmental conditions of the Library, appropriate organization of preservation activities, and preservation education and resources. Twenty-seven library staff members participated in the study as Study Team or task force members.

The study found that while 41.3% of the Library's general collection is in good condition, 20.1% of the collection is in poor condition, and 38.6% is in only a moderate condition. Specific storage collections are in less satisfactory condition. We are not unique in our problems. These findings are similar to collection condition findings reported elsewhere, thus our collections are in a condition to be expected in a typical academic research library. The study also found that while great improvements in heating, ventilating, and air-conditioning systems have been made in recent additions and remodelings, some problems in control of heat and humidity still exist in some areas of the Library's facilities, particularly during winter months. In addition the study found that organizational and procedural changes are necessary to better prepare the Library to cope with existing preservation challenges, and that further efforts to raise the preservation awareness of library staff and patrons is desirable and accomplishable.

Thirty-two recommendations were formulated to address these needs. Ranging from relatively simple changes in current procedures to new programs requiring substantial budgets, the recommendations are organized around four central goals: 1, to provide a coordinated library-wide approach to preservation; 2, to maintain and extend the useful life of the Library's collections so that they remain available for future use; 3, to achieve and maintain a preservationally-sound physical environment; and 4, to educate staff and patrons in preservation issues and proper techniques for handling library materials. A major theme in the recommendations is expanding the preservation

effort for the Library's general collections. Enlarging staff for conservation treatment, placement of all in-house binding and repair under the supervision of the Conservation Specialist, and other organizational and procedural changes that together would accomplish that are contained in a number of separate recommendations. Brittle books receive particular attention in the recommendations. Steps to improve the environment through adjustment or modification of existing systems are detailed. Other major recommendations concern the establishment of a new Preservation Coordinating Committee and the development of a broader and more formal staff and user preservation education program.

The recommendations were carefully considered with a view as to what is practicable and possible. Many can be achieved with relatively little monetary cost. Others, however, may be delayed until the University's budgetary situation improves or extraordinary funding such as grants is obtained. These recommendations are the result of an honest assessment not only of successes but the needs which must yet be met. This document is intended to help the Iowa State University Library successfully overcome the preservation challenge it now confronts.

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Acknowledgements

When the Preservation Planning Program was begun in the Fall of 1985, the Study Team had no clear ideas as to the time involvement that would be necessary to carry out the project. It could not have been carried out to a successful conclusion without the assistance and support from a large number of library staff members. Not only the many people who participated in the four task forces did an immense amount of work, but other staff members in all departments willingly helped with data gathering and other activities.

The Study Team would like to acknowledge specifically contributions of the following groups and individuals:

The Task Force members who gathered immense amounts of data and information, conducted interviews, compiled bibliographies and wrote extensive reports.

The Library Administration for providing release time to the many staff members throughout the project and for making available student assistants for many of the tasks, and particularly Warren B. Kuhn, the Dean of Library Services, for support and helpful suggestions.

Charles Sage, the Library's lead systems analyst, for designing a computer program to organize and analyze environmental data.

ARL/OMS consultants Duane Webster and Drew Racine who conducted workshops for the Study Team. Assistance of Drew Racine was particularly valuable during the last two phases of the project.

The Iowa State University Physical Plant staff who generously provided a significant body of environmental data from the computerized energy management system as well as information concerning the HVAC (heating, ventilating, air-conditioning) system.

Dr. Roy Hickman, from the University Statistical Laboratory, who designed a random sampling methodology and generated tables of data on the physical condition of the collections.

Don Novak, WOI meteriologist, who generously provided weather data for the environmental study.

All the staff who provided secretarial support, especially Carol Smith, the secretary to the Study Team, whose patience and efficiency was indispensible to the project.

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Introduction

As in all other research libraries, the collections in the Iowa State University Library are at risk. Most books published after the middle of the nineteenth century were printed on paper with high acid content, one of the chief causes of paper brittleness and a factor leading to its total disintegration. Other factors contributing to the deterioration of the collection include fluctuating humidity and temperature, ultraviolet light, occasional insect and mold infestation and improper handling methods of books. The study described in this report reveals that while 41.3% of the Parks Library collection is in good condition and 38.6% in moderate condition, one-fifth or 20.1% is in poor condition, and that 14.6% of the volumes are badly embrittled while another 15% is moderately embrittled. As collections continue to age, increased attention will need to be paid to their preservation.

The Iowa State University Library was fortunate to be among the ten major research libraries selected nationally by the Association of Research Libraries' Office of Management Studies to conduct an assisted self-study as a demonstration site for the Preservation Planning Program supported by the National Endowment for the Humanities. This study was intended to result in a series of recommendations for establishment of programs to meet the preservation needs of the Library. The ARL/OMS provided to the Library Preservation Planning Program manuals and resource notebooks as well as consultation. A grant of $1,000 was also provided under the program for certain basic needs.

The project was begun in the Fall of 1985 when the Dean of Library Services appointed a study team of six library staff members and charged it to: "investigate and report on the current state of the Library's collections in terms of preservation requirements and the capabilities of the Library to meet these needs; recommend a realistic plan of action that will assist the Library to deal most effectively with preservation issues, both near-term and long-range, which through specific objectives will help properly place preservation activities in the wider context in the library operation, priorities and budget; advise as to further development of positive approaches to and appreciation of preservation within the Library and throughout the scholarly community we serve." On December 10 and 11, 1985, two ARL/OMS consultants (Duane Webster and Drew Racine) visited the Library and conducted a workshop for the Study Team in order to implement the first phase of the project. During this first phase the Study Team conducted a background study which involved extensive review of literature, statements of the Library's mission, goals and policies, preservation activities, building history as well as internal and external preservation factors. The first phase was concluded in March 1986 with the promulgation of a background paper which documented the institutional setting, preservation activities, factors affecting preservation and planning assumptions.

In the second phase four task forces were appointed by the Dean of Library Services and charged to study and report on the following four areas of concern: organization of preservation activities, environmental conditions,

physical conditions of the collections, and preservation education and resources. The ARL/OMS consultant Drew Racine visited the Library on March 26, 1986, and met with all task forces as well as with the Study Team. A total of twenty-five staff members participated in the second phase. By February 1987, the task forces had carried out their charges and submitted their reports.

During the third phase which followed the final visit of the ARL consultant Drew Racine, the Study Team examined the task force reports and synthesized their recommendations into a final report. The recommendations listed in this report were carefully considered by the Study Team with a view as to what is practicable and possible. Some of the recommendations carry no cost tags whatsoever and many of them can be implemented at very little cost.

I. The University Library and Preservation

A. Strength of Library Collections

The Library was officially established in 1870. Until about the 1960's the collection emphasized mainly the traditional land-grant institution subjects of science and technology, such as agriculture, home economics, engineering and veterinary medicine. Particular efforts were made throughout the 1920's to build up backsets of scientific serials, but due to the depression these efforts were curtailed in the early 1930's. In subsequent years the growth of scientific serials continued, resulting in collections of national significance, particularly in such fields as biology, entomology, botany and zoology. Particularly notable are the holdings of publications of various academies of science from throughout the world. Based on various studies, the Library can further document the excellence of its serials holdings in mathematics, physics, chemistry, physiology, engineering and agriculture. The nationally recognized excellence of the scientific serials holdings is attributable in large measure to the extensive network of literature exchanges begun more than sixty years ago. The Library currently receives nearly 2,700 serial titles from about 1400 institutions world wide. Among the Library's exchange partners are some of the world's most prestigious scholarly bodies. A majority of scientific serials received by the Library from Eastern Europe, Latin America and Asia is obtained on exchange. Many of these serials are rarely held by other libraries. Unfortunately, a noticeable number of these foreign publications are contructed of low-quality materials and those from tropical areas are occasional sources of insect infestation.

The Library's significant collections are not limited to scientific serials. Important monographic collections also were developed in many scientific disciplines beginning in the 1920's. In particular many illustrated volumes were purchased in botany, entomology, ornithology and zoology. These now form the foundation for the rare book collection housed in the Department of Special Collections. Volumes on early scientific expeditions are also worth noting in this connection. Significant monographic collections of older materials exist also in the General Collection in agriculture, veterinary medicine, biology, engineering and mathematics.

Iowa State University began to evolve into a broad-based university in the 1960's. The Library consequently faced the need to broaden its collection scope from the earlier and more traditional land-grant concentration upon applied science and technology. The newly appointed Library Director, Warren B. Kuhn, began in 1967 to evolve approaches that would meet these new needs. Through his efforts and with the strong support of President W. Robert Parks and his University Administration, the Library's acquisitions budget was increased drastically. The Library's acquisitions rate also increased dramatically. The total volume collections have nearly tripled since 1967.

The Library collections now include 1,693,986 volumes, 1,920,777 microforms, 106,266 maps and aerial photos, 436,301 photographs, 38,711 audio/video materials and 2,321 linear feet of manuscripts and archival materials.

The collections of the Iowa State University Library are a major resource for the University and the state of Iowa. As indicated above, several collection strengths, especially in the biological and physical sciences and in scientific serials holdings, are recognized nationally. Aside from an incalculable intellectual value, as a repository of knowledge, these collections represent an immense financial investment which annually increases in value by several million dollars. Preservation of this resource, more than 120 years in creation, is one of the Library's principal responsibilities. Preservation planning thus must seek the most effective means of ensuring that the collections will continue to endure in order to support the education, scholarship and research efforts of the University.

B. Preservation Activities and Accomplishments

During the past two decades preservation has assumed an increasingly important role within the Library. In 1969 a Department of Special Collections was established to oversee and service the Library's rare books and manuscripts. The post of University Archivist was created in 1973. Many of the Library's present preservation concerns were first articulated in the 1970's within the Department of Special Collections. The Advisory Group on Conservation, a group which discussed conservation and preservation concerns was brought together by the Head of the Department of Special Collections in the late 1970's. As the concern for the condition of all collections in the Library grew, preservation became a library-wide issue. In 1981 the Dean of Library Services appointed a Conservation Task Force to study the overall conservation/preservation need of the Library, and in July 1982, that group produced a four page local program statement which identified priorities and proposed activities and policies. The Conservation Task Force became a standing committee in 1985. In 1982, the position of Conservation Specialist was established. This is a professional level position. The Conservation Specialist has responsibility in four areas: book and paper conservation, with particular attention to materials within the Department of Special Collections; preservation, particularly policy and procedure recommendations for the Library; management and operation of a pest control and prevention program; and preservation education of library staff and patrons.

In 1981 the Dean of Library Services appointed a Disaster Preparedness Task Force to prepare a disaster plan for the Library. After preparation of a disaster preparedness and response document, the Task Force remained in place as a Disaster Committee for the purposes of remaining abreast of developments in library disaster recovery and periodic updating of

the disaster plan. Early in the first phase of the local Preservation Planning Program, the Study Team reviewed the existing disaster plan and met jointly with the Disaster Committee for discussion of the strengths and weaknesses of the document. Consequently, during the life of the Preservation Planning Program, the Disaster Committee undertook a thorough review of disaster preparations and produced a newly revised version of the disaster plan document. Having already tested various elements of the plan in meeting actual water damage challenges, including the employment of freeze-drying technology, the Library is very adequately prepared to meet its needs in this area of collections preservation.

Construction of the Library's new addition, completed in 1983, included creation of a Conservation Laboratory and the only library fumigation facility in an Iowa Board of Regents' institution. Currently all materials destined for Special Collections are fumigated. Other materials are fumigated only if any show mold or insect infestation. In connection with the construction extensive steps were taken to add fire protection, security and improvement of air handling and temperature throughout the new and remodeled Library building. In particular, the new quarters of Special Collections features security systems, a fire suppression system (Halon) and environmental controls appropriate for preserving rare books and archival collections. There have been ongoing major expenditures for preservation equipment, supplies and special binding. Due to the Library's efforts the Graduate College Thesis Office now requires that theses placed on deposit in the Library be on archival bond paper.

II. Planning Assumptions

The Study Team elaborated several assumptions which emerged during its discussions and which had a bearing on the work of the Task Forces.

The first of these assumptions was that the Iowa State University Library collections will continue to grow. This growth, however, may well be at a somewhat slower rate than that of the past twenty years. It is further assumed that the collection emphasis will remain in the traditional strength areas of sciences and technology and that retrospective collection building will receive lower priority in the future. New formats will continue to proliferate, and the Library will no doubt add many of these new formats to its collections. For example, we are now beginning to acquire computer software packages which have their own preservation problems.

The second assumption was that the Library will not be able to acquire new space for its collection during the next ten years. The consequences of this are ominous. It is estimated that all available space for the book collection will be totally filled within the next five to six years. Removing patron seats to replace them with bookstacks is a stop-gap measure, but it is the only obvious short term strategy available. A new alternative may come about through construction and relocation of a library storage facility; a new molecular biology building has just been approved for Iowa State and its proposed site may require relocation of the Library's current and indequate storage facilities. Because of the general lack of space, the Library will also experience frequent collection shifts and future overcrowding of the shelves creating additional strains on the collection.

The third assumption was that preservation concerns will grow in importance in the years to come. The Library's book collection is not getting younger; as the collection ages, the number of brittle and unusable books will continue to increase. Increasing use of the collection combined with increasing overcrowding of the collection can only escalate deterioration. To fulfill the Library's mission of providing information to faculty and students, steps will have to be taken to deal with the brittle book problem and other kinds of physical deterioration and damage.

The fourth assumption was that technological advances such as optical disks and deacidification cannot be relied upon to provide significant assistance to our preservation needs in the immediate future. The condition of retrospective collections will remain a major preservation problem, regardless of the development of new publication formats or the improvement of the physical quality of published materials. Treatment options, regardless of any increases in their scope or availability, may continue to be financially unfeasible.

A final assumption was that the present budgetary constraints will continue for at least the next five years. In times of austerity there are many conflicting demands. Difficult choices will have to be made given very limited resources. Acquiring of new publications, processing them for use, and assisting patrons at the various service desks will undoubtedly be considered higher priority activities than some preservation activities. Budgetary constraints will have to be taken into consideration as recommendations for preservation planning are being developed. While certain goals can be achieved with relatively little monetary input, some preservation actions will inevitably have to be delayed unless the University's budgetary situation improves, or unless outside grant funding is obtained.

III. The Preservation Planning Program: Summaries of the Task Force Reports

A. Organization of Preservation Activities

The Charge

The Task Force on the Organization of Preservation Activities was charged with reviewing the Library's operations and organization, becoming informed about preservation organization in other research libraries, identifying and gathering information on the Library's staffing and expenditures for preservation and then formulating recommendations following this review and information-gathering process.

Methodology

Over 35 library staff members in various areas of the Library were interviewed by the Task Force. Basic questions asked of all interviewees concerned the handling of materials, preservation-related training and

education, preservation concerns or procedures, the contacts with the Conservation Specialist as well as specific questions relating to the individual's job responsibilities. The Task Force also reviewed published articles, organization charts, and other information pertaining to preservation organization.

Findings and Recommendations

From the interviews the Task Force found that staff members were interested in preservation issues and expressed concern regarding their need for further training and education. The need for written procedures relating to preservation and concern regarding the types of supplies used were frequently mentioned. The need for more contact and guidance from the Conservation Specialist was also expressed in these interviews. From the review of written information as well as from the information gained from the interviews a recommendation for the establishment of a Preservation Coordinating Committee was formed. Ideally, the Library's organization structure should include a Preservation Officer as well as a Conservation Specialist. Since funding for such a position is not likely to be forthcoming, the Task Force felt that the Preservation Coordinating Committee would provide a viable alternative. The Task Force also found that more emphasis needs to be placed on General Collection preservation. It recommends that in-house repair and binding be expanded and that the Conservation Specialist provide more attention to the General Collection. The Task Force furthermore recommends that at least a half-time Conservation Technician position be created to assist the Conservation Specialist, with most of the position's time devoted to in-house binding, repair, and fumigation of the General Collection.

B. Physical Condition of the Collections

The Charge

The Task Force on the Physical Condition of the Collections was charged to survey the condition of the collections in the Parks Library and extramural facilities, to analyze the survey data within a preservation context and to develop recommendations based on this analysis.

Scope

The Task Force focused its work on two main collections, the Parks Library which is the main library building at Iowa State (including the General Collection, the Reference Collection, and the Ground Storage area) and the Storage Building. A total of 2,174 volumes was surveyed, 1,600 from the Parks Library and 574 from the Storage Building. Only bound and unbound monographs and bound serials were included in the study. The following bibliographic information was gathered for each volume examined: call number, year of publication, country of publication, country of printer (if different from publisher), circulation status, number of times circulated, type of binding, type of material (serial

or monograph), and shelving location. The following physical condition data were gathered: brittleness and general condition of paper, acidity of paper, condition of binding, condition of boards and covers, mutilation, mold and fungus damage, insect and rodent damage, torn headcaps, previous repair, photocopied replacement pages, and foxing.

Methodology

In consultation with the University's Statistical Laboratory, the Task Force developed a survey methodology based on random sampling of shelving locations. The Task Force first determined how many shelves in the Parks Library and Storage Building contained material meeting its selection criteria. Qualifying shelves and sections were counted, numbered, and entered in a file at the University Computation Center. Based on this data, the Statistical Laboratory generated worksheets which included both random sampling information and the form for coding survey data. Using the random sampling information on each workform, appropriate sections and shelves were located. For each shelf selected, a sample book number was calculated and the appropriate volume was pulled. Volumes to be surveyed were then assembled in a central work area. Following detailed instructions for evaluating bibliographic and physical characteristics, Task Force members completed a worksheet for each survey volume. Data from the workforms were input in a file at the Computation Center, reviewed for errors, and corrected. The Statistical Laboratory generated forty cross tables for both the Parks Library and the Storage Building data sets. The cross tables allow an individual physical characteristic, such as brittleness, to be analyzed by an individual bibliographic characteristic, such as call number.

An overall book score was formulated for each volume examined by rating each of the seven major physical characteristics (brittleness and general condition of paper, acidity, bindings, boards and covers, mutilation, mold and fungus damage, insect and rodent damage) on a two- or three-point scale from zero (good) to two (poor). This score was calculated by adding together the numeric ratings for all seven characteristics. The best possible overall book score was zero, a rating of good in all seven categories; the worst possible score was 14, a rating of poor in all seven categories. A "good" overall book condition was defined as a total score of zero to one. A "moderate" condition was defined as a total score of two to three and a "poor" condition was set at total score of four or more.

Findings

Parks Library

In the Parks Library, 20.1% of the survey population is in poor condition, 38.6% in moderate condition, and 41.3% in good condition (see Appendix I). Poor condition of paper is the most important factor contributing to the overall poor condition of materials. Some 14.6% of the Parks Library population is badly embrittled, while another 15.0% is moderately embrittled (see Appendix II). Acidity results are significantly worse, with 48.5% of all materials highly acidic and 25.3% moderately acidic

due, of course, to the paper and materials used at the time of their publication (see Appendix III). Because the acid content of paper has been correlated with its longevity, high levels of acidity indicate a short useable life span. Acidity is a particularly severe problem for volumes published between 1870 and 1945. More than 80% of all materials published during these years are highly acidic (see Appendix IV). Acidic volumes are steadily deteriorating, resulting in an ever increasing percentage of brittle volumes in the collection. Call number groups G; HM - HX; L; Q - QE; S; and T are especially brittle and acidic. Thus some of the Library's most important collections, including science, mathematics, physics, chemistry, agriculture, technology, and engineering, are in poorest condition in terms of condition of paper.

In general, bindings and boards and covers are in good condition, with bindings in slightly better condition than boards and covers. Eighty-eight percent of the boards and covers in the Parks Library population are in good condition; 92.9% of the bindings are in good condition. Of the six types of bindings surveyed, commercial library (Hertzberg-New Method) bindings and in-house bindings (tape and staple bindings, etc.) are in the best condition. For example, 97.8% of all commercial bindings and 97.2% of all commercial boards and covers are in good condition, while for publishers' bindings only 87.2% of all bindings and 77.8% of all boards and covers are in good condition. These results indicate that there are no significant problems associated with the quality of binding supplied by the Library's binder.

While bindings and boards and covers are, overall, in good condition, the total number of volumes in moderate and poor condition (219,928 volumes) is substantial, indicating an urgent need for more in-house repair work to be done. Condition of bindings is especially poor for call number groups A, ISU, and Z; B; M - N; R; and S. Condition of boards and covers is especially poor for call numbers A, ISU, and Z; B; G; HM - HX; and M - N.

Damage caused by mutilation, mold, fungus, insects, and rodents is not as widespread a preservation problem as is poor paper condition. However, significant numbers of volumes are affected. Some 13.4% of the Parks Library population has been mutilated in some fashion, with approximately 120,350 volumes moderately mutilated and 33,336 volumes severely mutilated. Call number groups A, ISU, and Z; B; G; H; and M - N have been most affected. Some 15,264 volumes show evidence of previous mold or fungus damage, and 2,664 volumes show evidence of insect or rodent damage.

Storage Building

The overall condition of materials in the Storage Building is, as expected, worse than that of materials in the Parks Library. The Storage Building (1940) is a metal structure, one of the first separate library storage facilities built in the U. S. It lacks air-conditioning and humidity controls, and its construction type, location, and age provide an extremely poor storage environment. Some 41.2% of the Storage Building population is in poor condition, as compared with only 20.1% for Parks Library (see Appendix I). Two factors, brittleness and acidity, contribute most to this higher proportion of materials in poor condition, the result of the poor storage itself and the fact that generally only

older, lesser-used volumes are shelved here. Thirty-six percent of the Storage Building collection is badly embrittled, while another 19.9% is moderately embrittled (see Appendix II). Acidity results are especially alarming, with 69.9% of the collection severely acidic and 12.1% moderately acidic (see Appendix III).

For the remaining physical characteristics examined, Storage Building results were similar to those for the Parks Library. Bindings and boards and covers are generally in good condition, with only 10.0% of all bindings in moderate or poor condition and 11.4% of all boards and covers in moderate or poor condition. Less than 2% of the Storage Building population shows evidence of mold, fungus, insect, or rodent damage.

See Appendixes V and VI for a summary of data gathered on physical characteristics.

Recommendations

Condition of Paper. To combat the problem of an ever-increasing percentage of brittle volumes among its holdings, the Library must establish a long-range plan to identify and replace brittle volumes on an ongoing basis. Brittle volumes which cannot be replaced immediately should be transferred from open stacks to a closed storage area. Whenever possible, the Library should limit the addition of acidic materials to its permanent collections.

Condition of Bindings, Boards, and Covers. Greater staff time should be devoted to identifying, prioritizing, and treating damaged volumes in the General Collection. Greater repair efforts are especially needed. Patrons and staff should be educated in proper techniques for handling library materials.

Mutilation. Patrons and faculty should be educated about the serious damage caused by mutilation and about the negative impact class assignments can have on library materials. The Library should increase its holdings of serial backfiles in microform for heavily mutilated subject areas.

Mold, Fungus, Insect, and Rodent Damage. Patrons and staff should be further educated about the damage food, beverages, and tobacco can cause to library materials. A food policy and guidelines for enforcing such a policy should be written, reinforcing the present attempts being made to control these concerns. Collections should continue to be monitored for evidence of mold, fungus, insect, and rodent damage. Problem areas should be treated appropriately as discovered.

Storage Building. Storage Building holdings in certain subject areas are likely to include a number of significant early serials. These subjects should be reviewed to identify unique or especially valuable titles and to determine if such titles should be microfilmed, replaced, or transferred to a brittle volume area in Ground Storage. (This latter facility in the new addition (1983) to the Parks Library offers HVAC - controlled compact storage on the Parks ground level floor.)

C. Environmental Conditions

The Charge

The Task Force on Environmental Conditions was charged to investigate the current environmental conditions in the Library and in the branch facilities, to analyze the data collected within a preservation context, and to develop recommendations based on this analysis.

Temperature and Humidity

Initially, the task force studied the heating, ventilating, and air-conditioning system (HVAC) utilized in the Parks Library. This building (1925) has three successive additions (1961, 1969, 1983). HVAC controls must therefore attempt to accomodate a variety of existing environments, each of which was created within limited funding parameters. Complete change to a single modern HVAC system from several older systems has never been possible. An inventory led to station locations where temperature and relative humidity levels were measured. Readings were taken twice a day on Wednesdays and Fridays and once on Sundays over a nine week period (April 18, 1986 through June 20, 1986). In addition, corresponding external weather data were compiled along with physical plant readings for the Library's air handlers. Although the combined average of the 42 stations fell between 68°F (the ideal) and 72°F, several individual stations averaged over 75°F. Air Handlers #1 and #4 accounted for most of the stations having high temperatures. The standard deviation in temperature on all stations was low. The Special Collections area, particularly Storage and Processing, had the lowest average temperatures and variances. Overall, the relative humidity during the nine week period was not too high but the standard deviation was very great (see Appendix VII). This is very damaging to library materials, which have to constantly adjust their moisture content to stabilize. The readings taken during the winter season showed the relative humidity levels to be dangerously low throughout the Parks Library as well as the Veterinary Medical Library. They hovered near 20% relative humidity below which the damage is irreversible. The temperature levels recorded in the Storage Building were far above the ideal, particularly during the summer season. One week period revealed a range from 90°F-100°F, with large variances over each 24 hour period.

Illumination Levels

Once the temperature and relative humidity readings ceased, an inventory of the Parks Library for stations at which to take light measurements occurred, resulting in 49 stations. Members worked in teams, taking readings under sunny, cloudy and dark conditions. The General Collection had very high visible light levels, particularly on the open floors in certain locations. The Reserve stacks, Reference stacks, Periodical Room materials, and Map Room area had high light levels as well. Again, much of the problems uncovered were due to the use of older, existing facilities which were remodeled or transformed into areas differing in use from those originally designed. The major problems occurred in the original (1925) building portion. In the Storage Building the

ultraviolet light levels were high and the areas adjacent to the windows had high visible light levels in addition to high ultraviolet light levels. The light levels in the Veterinary Medical Library were higher than desirable near the west windows and the top periodical shelving units.

Other Environmental Conditions

Ten glue traps were placed strategically throughout the Parks Library to monitor insect, larva, rodent and related traffic. The were inspected periodically. Results revealed the Oriental cockroach as predominant, with dermestid beetles, silverfish, spiders, ants, gnats, pill bugs and field mice making up the remaining findings. The food/drink/tobacco policy is often abused, particularly on weekends. The Storage Building and Veterinary Medical Library display no problems with insect/rodent infiltration or abuse of food, drink or tobacco. Cleanliness is most lacking in the Storage Building, most apparent in the Veterinary Medical Library. The Parks Library has recently been able to carry out systematic cleaning of the tiers and stacks since appropriate staff and funds have been available; it will continue as long as the latter conditions exist. All of the HVAC air handlers are equipped with air filters to lessen the chance of material deterioration through pollutants.

Recommendations

The Task Force recommends that the relative humidity levels in the Parks Library, Veterinary Medical Library and Design Reading Room be raised to 40%RH during the winter season to prevent irreversible damage to the materials. The temperature in the Parks Library should adhere more closely to the ideal of 68°F and variability in both temperature and relative humidity should be decreased. Where direct sunlight falls on the collections, curtains or white blinds should be employed and UV-absorbent film placed on the windows. The possibility of staggered lighting, as well as alternatives to current metal halide lights for security lighting and the occasional artwork lighting should be explored. Ultraviolet filter sleeves should be considered for fluorescent tubes wherever library material is stored. The shields on these fluorescent bulbs should not be rotated down. There should be a written food policy so that staff can enforce it more easily. If the Storage Building is replaced in the near future, the Task Force urges that the new structure have appropriate environmental conditions to ensure a significant decrease in the present rate of deterioration of material housed there.

D. Preservation Education and Resources

The Charge

The Task Force on Preservation Education and Resources was charged to investigate existing and potential means of educating staff and library users about preservation concerns and to examine the resources which can be utilized to enhance a preservation program in the Library.

The Scope

Investigation of current education and training programs as well as educational resources available was focused on this Library. The term "resources" was interpreted to include all types of media (videotape, slide/tape, posters, etc.) as well as print materials. While educational programs, continuing education, grant funding and cooperative efforts relating to libraries in general were investigated, interviews on educational programs in other libraries were limited to the other Big Eight universities.

The Methodology

A questionnaire was developed and interviews conducted with 26 library staff members regarding training in the physical handling of materials. Published information about preservation was obtained by searching the literature and by reading the materials listed in the Preservation Planning Program Resource Notebook. An extensive bibliography of the resources held by the University Library was compiled. Furthermore, a telephone survey of the Big Eight university libraries was conducted.

Findings

Currently training in physical handling of library materials to students and staff is concentrated in four areas: Access Services, Special Collections, Technical Services and the Conservation Specialist's office. There are no regular formal programs providing preservation education for all library staff and patrons. The Library, however, has a good collection of print materials in the area of preservation. The survey indicates that the Library holds 65% to 89% of titles listed in major bibliographies. The holdings of audio/visual materials are minimal although the Library has produced a 13-minute color video program illustrating preservation concerns which has been shared with a number of other state associations. There are many continuing education opportunities in the field of preservation that could be utilized by the library staff.

Recommendations

The Task Force recommends that a regular education program in preservation be established for all library staff and library users which should include proper techniques for handling materials to reduce damage and mutilation of materials. Library staff and patrons should also be educated on ongoing basis about the damage food and beverages can cause to library materials. Necessary resources should be provided for the library staff to most effectively carry out preservation related duties. Grant funding for preservation needs should be investigated.

IV. The Preservation Planning Program: Recommendations

The 32 recommendations listed below were developed from the reports submitted by the four Task Forces and from thorough discussions of these reports by the Study Team. The recommendations range from relatively simple changes in procedures to new programs requiring substantial budgets. Throughout its deliberations the Study Team was mindful of the present budgetary constraints under which the Library has to operate. The Study Team felt that it would have failed to carry out its charge if it had not made some of the more costly recommendations. Of course, implementation of such recommendations will have to be delayed until the financial situation improves. Some recommendations are intended to build on preservation procedures or activities already in place. They merely need to be improved upon or formalized.

The recommendations are organized around four central goals: 1) providing a coordinated library-wide approach to preservation, 2) maintaining and extending the useful life of the collections to make them available for future use, 3) achieving and maintaining a preservationally sound physical environment, and 4) educating staff and patrons in preservation issues and proper techniques for handling library materals.

Each recommendation includes a statement of implementation covering responsibility for implementation, time frame, priority, and cost. Priority is expressed numerically: 1--signifying high priority, 2--medium priority, and 3--low priority. The Study Team did not determine specific costs for any of the recommendations. In many instances these amount to staff time. In some cases costs are expressed as low, medium or high with low cost meaning less than $500; medium cost, $500 - $10,000; and high cost, more than $10,000. Very few recommendations are in the high cost category.

The final reports of the four Task Forces should prove very valuable when implementation of the recommendations is considered. They contain an immense wealth of materials--nearly 200 pages of text and statistical data. An important element in the recommendations is the concern to increase awareness of preservation concerns among the library staff as well as users. This study itself has done much towards raising such an awareness among library staff at all levels because of the broad staff representation in the task forces.

A. Organization

Goal: Provide a coordinated library-wide approach to preservation.

Recommendation 1. Establish a Preservation Coordinating Committee.

This committee would:

a. Develop and plan methods of implementing PPP recommendations within the constraints of the library budget.

b. Assign responsibilities for implementation of PPP recommendations.

c. Monitor implementation of PPP recommendations.

d. Report on implementation of PPP recommendations on a regular basis to the Dean of Library Services.

e. Establish procedures for the regular preservation monitoring of the collection and its environment.

f. Identify preservation problems and concerns.

g. Establish policies and procedures for handling materials.

h. Pursue alternate sources of funding for preservation of the collection.

i. Coordinate the establishment of a staff education program.

j. Establish priorities for purchase of preservation-related supplies.

This committee's membership would include the four Assistant Directors, the Conservation Specialist, the Chair of the Disaster Team, the Heads of the Special Collections, Serials, and Access Services Departments, a bibliographer, and other individuals as appointed by the Dean of Library Services. This Committee would be chaired by the Assistant Director for Collection Development and report to the Dean of Library Services.

Implementation:
Responsibility: Dean of Library Services
Time Frame: Immediately
Priority: 1
Cost: Staff time

Recommendation 2. Clarify and expand the role of the Conservation Specialist to include more attention to the needs of the General Collection and more emphasis on preservation education activities:

a. Establish additional routines, standards and levels of treatment beyond those already employed, and document procedures for mending and restoration of library materials.

b. Screen and determine necessary level of repair for all materials in need of mending.

c. Train and supervise the Conservation Technician.

d. Review all archival and preservation-related supplies and equipment for compatibility with established preservation goals. Make recommendations as necessary.

e. Participate on a wider basis in the decision making process related to preservation of the collection.

f. Monitor environmental condition of the collection.

g. Supervise or execute, as appropriate, cleaning of library materials.

h. Develop a preservation education program for library staff and patrons.

i. Conduct this program by means of workshops, talks, media presentations, and displays, as appropriate.

j. Train key staff members in preservation techniques appropriate to their employment positions.

The Conservation Specialist should continue as at present to:

k. Identify and execute necessary repairs and restorations on Special Collections materials.

l. Periodically examine materials in the Processing Room (92G) for pests that could contaminate the rest of the library collection.

m. Supervise and perform fumigation of suspect material found in the above examination or existing library collections by using the Vacudyne or other appropriate methods of pest control.

n. Develop routines and document procedures for use of the Vacudyne and other applicable methods of pest control.

o. Serve as a resource person within the Library for preservation techniques, issues and policies.

p. Keep current with developments in the fields of preservation and conservation.

Implementation:
Responsibility: Assistant Director for Collection Development/
Preservation Coordinating Committee/
Conservation Specialist
Time Frame: 6 months
Priority: 1
Cost: Staff time

Recommendation 3. Establish a Conservation Technician position at least at half-time level.

This position would:

a. Be responsible for all repair of monographs and serials from the Library's collection.

b. Provide assistance and demonstrate appropriate techniques to other departments in the Library.

c. Fumigate materials which have been judged by the Conservation Specialist to be contaminated.

d. Help with cleaning other items, such as manual cleaning of any mold from library materials.

e. Assist the Conservation Specialist in the event of a disaster (fire, water damage, etc.)

Implementation:
Responsibility: Dean of Library Services
Time Frame: 1-2 years
Priority: 1
Cost: LA II level salary + benefits

Recommendation 4. Incorporate preservation issues and concerns into departmental policies and procedures.

a. Establish written library-wide policies outlining where responsibility lies for making various decisions relating to preservation.

b. Provide written instructions and criteria concerning preservation related procedures.

c. Review periodically by the Conservation Specialist all procedures which have preservation implications.

d. Include written library-wide preservation policies regarding proper handling of library materials in all handbooks and training manuals.

Implementation:
Responsibility: Department Heads
Time Frame: 6 months - 1 year
Priority: 2
Cost: Staff time

Recommendation 5. Determine any specific preservation needs when purchasing and using supplies connected with the handling and processing of materials.

a. Review supplies as they are purchased for preservation concerns.

b. Reduce the use of potential problem supplies such as rubber bands, paper clips, hard string, etc., by providing alternative materials or changing workflow.

c. Provide staff members with additional preservationally-sound materials that also fill their operating needs.

Implementation:
Responsibility: Conservation Specialist/Preservation Coordinating Committee
Time Frame: Immediately and ongoing
Priority: 2
Cost: Staff time; costs to be determined

Recommendation 6. Continue to use Room 92G for processing of gift materials and new items which are suspected of containing mold or insect infestation. Items should be reviewed before leaving this area.

Implementation:
Responsibility: Assistant Director for Collection Development
Time Frame: Ongoing
Priority: 1
Cost: Staff time

Recommendation 7. Continue to use Room 92B as a pesticide treatment room for the use of paradichlorobenzene or other appropriate methods.

Implementation:
Responsibility: Assistant Director for Collection Development/ Conservation Specialist
Time Frame: Ongoing
Priority: 1
Cost: Staff time

Recommendation 8. Provide further appropriate space for in-house binding and repair.

Implementation:
Responsibility: Preservation Coordinating Committee
Time Frame: 1-2 years
Priority: 1
Cost: To be determined

B. Physical Condition

Goal: Maintain and extend the useful life of the Library's collections so that they remain available for future use.

Recommendation 9. Develop a long-range plan for identifying, protecting, and replacing brittle volumes on an ongoing basis.

a. Survey subject collections with the highest levels of brittleness and acidity in greater depth to identify which sub-classifications are in poorest condition.

Implementation:
Responsibility: Assistant Director for Collection Development
Time Frame: 1-2 years
Priority: 3
Cost: Staff time; computer time - to be determined

b. Review present and future data on brittle holdings, develop strategies for identifying specific titles in need of replacement, and prioritize titles to be replaced in terms of importance and uniqueness.

Implementation:
Responsibility: Assistant Director for Collection Development/ Bibliographers
Time Frame: 1-2 years, ongoing
Priority: 2
Cost: Staff time

c. Develop guidelines for determining whether brittle volumes should be withdrawn or be replaced with reprint editions, preservation photocopy volumes, commercially published microforms, or preservation microfilms produced at the Library's request.

Implementation:
Responsibility: Preservation Coordinating Committee
Time Frame: Immediately
Priority: 1
Cost: Staff time

d. Transfer brittle volumes which cannot be replaced immediately from open stacks to a closed storage area. Make protective storage boxes for items needing shelving support. Limit circulation and photocopying of brittle volumes to minimize further damage.

Implementation:
Responsibility: Head, Access Services/Conservation Specialist/ Bibliographers
Time Frame: Immediately, ongoing
Priority: 1
Cost: Staff time

Recommendation 10. Limit the addition of acidic materials to the Library's permanent collections whenever possible.

a. Survey new acquisitions to identify publishers currently using highly acidic paper. Encourage publishers, especially academic and scholarly presses, to use acid-neutral, permalife paper meeting ANSI standard Z39.48-1984.

Implementation:
Responsibility: Preservation Coordinating Committee
Time Frame: 1-2 years
Priority: 3
Cost: Staff time; computer time - to be determined

b. Increase the use of acid-neutral, permalife paper meeting ANSI standard Z39.48-1984 for all photocopies added to the Library's permanent collection.

Implementation:
Responsibility: Assistant Director for Collection Development/ Head, Access Services/Head, Serials Department/ Photoduplication Supervisor
Time Frame: 6 months, ongoing
Priority: 1
Cost: Low

c. Encourage more careful screening of brittle volumes which have been accepted as gifts before adding them to the collections. Retain materials which are likely to disintegrate after only a few circulations only if they are judged to be important to our holdings.

Implementation:
Responsibility: Bibliographers/Conservation Specialist
Time Frame: Immediately, ongoing
Priority: 1
Cost: Staff time

d. Monitor future development of mass deacidification facilities available to the Library.

Implementation:
Responsibility: Conservation Specialist/Preservation Coordinating Committee
Time Frame: Immediately, ongoing
Priority: 2
Cost: Staff time

Recommendation 11. Devote greater staff time to identifying, prioritizing, and treating damaged materials in the General Collection.

a. Assign specific staff responsibility for identifying volumes in need of treatment. Among others, appropriate staff might include the Conservation Specialist, subject bibliographers, and Access Services staff.

Implementation:
Responsibility: Preservation Coordinating Committee
Time Frame: 6 months
Priority: 1
Cost: Staff time

b. Increase staff efforts in repairing, rebinding, replacing, or withdrawing damaged volumes as appropriate.

Implementation:
Responsibility: Conservation Technician/Conservation Specialist/ Bibliographers
Time Frame: 1-2 years
Priority: 1
Cost: Staff time

c. Establish formal procedures for prioritization of volumes identified for repair on the basis of their importance to the Library's collections.

Implementation:
Responsibility: Bibliographers
Time Frame: 1-2 years
Priority: 1
Cost: Staff time

d. Formalize appropriate repair techniques for each volume in need of repair.

Implementation:
Responsibility: Conservation Specialist
Time Frame: 1-2 years
Priority: 1
Cost: Staff time

f. Increase attention to repairing, rebinding, or cleaning of gift materials as needed before adding to the collections.

Implementation:
Responsibility: Conservation Technician/Conservation Specialist
Time Frame: 1-2 years
Priority: 1
Cost: Staff time

g. As staff time is available, consider undertaking a special repair/rebinding project for materials housed in the Ground Storage area.

Implementation:
Responsibility: Conservation Technician/Conservation Specialist/Preservation Coordinating Committee
Time Frame: 1-2 years
Priority: 2
Cost: Staff time, rebinding costs

Recommendation 12. Re-establish provision of appropriate binding treatment, now suspended for lack of funds, for all acquisitions received in paperback or other soft-cover formats before adding them to the collections.

Implementation:
Responsibility: Head, Serials Department/Section Head, Serials Processing Section/Conservation Specialist
Time Frame: 1-2 years
Priority: 1
Cost: Medium; to be determined

Recommendation 13. Consider acquiring additional serial backfiles on microfilm, either as the sole backfile or in addition to a paper copy backfile, in heavily mutilated subject areas.

Implementation:
Responsibility: Bibliographers/Head, Microforms & Media
Time Frame: 3-5 years
Priority: 3
Cost: High; to be determined

Recommendation 14. Examine each volume found by this physical condition survey to show evidence of mold, fungus, insect, or rodent damage. Determine if these problems affect materials shelved nearby and treat damaged materials appropriately.

Implementation:
Responsibility: Conservation Specialist
Time Frame: Immediately
Priority: 1
Cost: Staff time

Recommendation 15. Survey the condition of collections not covered by this study.

a. Review collections as possible not yet surveyed to prioritize areas for future study. Major collections not surveyed include outlying reading rooms, microforms, media materials, maps and other flat-paper materials, reserve materials, and current periodicals.

b. Consider surveying foreign acquisitions to identify special preservation problems associated with materials from specific foreign countries or regions. Such a survey would need to be based on a population made up exclusively of foreign publications.

Implementation:
Responsibility: Preservation Coordinating Committee
Time Frame: 3-5 years
Priority: 3
Cost: Staff time; computer time - to be determined

C. Environment

Goal: Achieve and maintain a preservationally-sound physical environment in the Iowa State University Library.

Recommendation 16. Adjust and modify to the extent practicable the present heating, ventilating and air-conditioning (HVAC) systems in the Parks Library and the Veterinary Medical Library to maintain appropriate relative humidity and temperature levels.

a. Increase relative humidity for the Parks Library during the winter season, with the objective range of 40%RH±5%. Investigate the extreme variability year-round in the percent of relative humidity to determine the possible causes of this harmful environmental condition.

Implementation:
Responsibility: Assistant Director for Administrative Services/ Physical Plant
Time Frame: 6 months - 1 year
Priority: 1
Cost: To be determined

b. Raise and stabilize relative humidity levels during the winter in the Veterinary Medical Library before further irreversible damage takes place.

Implementation:
Responsibility: Assistant Director for Administrative Services/ Physical Plant
Time Frame: 6 months - 1 year
Priority: 1
Cost: To be determined

c. Achieve closer adherence to 68°F, the ideal temperature in the Parks Library. Examine the efficiency of Air Handlers #1 and #4 to reduce high temperature levels found in the areas they control.

Implementation:
Responsibility: Assistant Director for Administrative Services/ Physical Plant
Time Frame: 1-2 years
Priority: 2
Cost: Low

d. Continue to monitor temperature and relative humidity level readings in the Parks Library and the Veterinary Medical Library. Continue data analysis with input from former Environmental Conditions Task Force members.

Implementation:
Responsibility: Conservation Specialist
Time Frame: Ongoing
Priority: 1
Cost: Staff time

e. Determine the proper physical environment for non-paper formats (microforms, media materials, computer disks, etc.).

Implementation:
Responsibility: Conservation Specialist
Time Frame: 1-2 years
Priority: 3
Cost: Staff time

Recommendation 17. Reduce levels of illumination and ultraviolet light where the collections are housed to lessen damage to library materials.

a. Employ curtains or white blinds where direct sunlight falls on the collections. Place UV-absorbent film on these windows. Install curtains or film on the windows surrounding the Exhibit Room of the Department of Special Collections. In the future, if book stacks are added near untreated windows, these windows should be treated as well.

Implementation:
Responsibility: Assistant Director for Administrative Services/ Physical Plant
Time Frame: 1-2 years
Priority: 1
Cost: Medium, staff time

b. Utilize UV-filter sleeves for fluorescent tubes wherever library material is housed as funds permit. Check them periodically to determine efficiency. Wherever library materials are permanently shelved, do not rotate shields to expose the fluorescent bulbs as this increases the ultraviolet radiation and footcandle light levels. Consider staggered lighting for the floor stacks in view of the high footcandle levels.

Implementation:
Responsibility: Assistant Director for Administrative Services/ Physical Plant
Time Frame: One area at a time as funds permit, e.g. one floor/tier per year
Priority: 2
Cost: Medium

c. Consider alternative lighting methods for the Grant Wood murals in the east lobby and second floor landing. Before new art works are installed in the Parks Library, investigate environmental conditions in the proposed locations. It is understood that art (paintings) must be seen to be appreciated and that many library locations suitable for them face art lighting problems due to functional building design.

Implementation:
Responsibility: Assistant Director for Administrative Services/ Conservation Specialist/Physical Plant
Time Frame: 3-5 years
Priority: 2
Cost: Medium

d. Consider replacement of metal halide lights or add filters wherever these are located near library materials. These few now used due to building need generate high visible/ultraviolet light levels as well as heat.

Implementation:
Responsibility: Assistant Director for Administrative Services/ Physical Plant
Time Frame: 6 months - 1 year
Priority: 1
Cost: Low

e. Close present window curtains in the Veterinary Medical Library in order to reduce the ultraviolet radiation and footcandle illumination as well as the higher temperature levels recorded in this window area.

Implementation:
Responsibility: Veterinary Medical Librarian
Time Frame: Ongoing
Priority: 2
Cost: No cost

Recommendation 18. Provide optimum environmental controls for any external storage facility insofar as this is possible given funding limitations. While current plans envisage vacating the present Storage Building in the near future, the following steps should be taken, as appropriate, for the existing structure as well as for future external storage areas.

a. Monitor temperature, relative humidity, and visible/invisible light levels. Place and inspect insect/rodent traps. When detrimental findings occur, discuss with appropriate staff for correction.

Implementation:
Responsibility: Conservation Specialist
Time Frame: Ongoing
Priority: 1
Cost: Staff time

b. Ideally, there should be no windows in a storage building. If they are present, install coverings in order to reduce illumination and ultraviolet light levels damaging to library materials near them.

Implementation:
Responsibility: Assistant Director for Administrative Services/ Physical Plant
Time Frame: 6 months - 1 year
Priority: 1
Cost: Low

Recommendation 19. Periodically take readings in the Physical Sciences and Design Reading Rooms regarding temperature, relative humidity and light. If indicated, Physical Plant should adjust the HVAC systems to ensure proper temperature and relative humidity levels.

Implementation:
Responsibility: Conservation Specialist
Time Frame: Ongoing
Priority: 3
Cost: Staff time

Recommendation 20. Provide more frequent checking, and cleaning if necessary, of the Parks Library Plenum drain in the original building (1925). It has been an unfortunate contributing factor to the high percent of relative humidity in the Reserve area.

Implementation:
Responsibility: Assistant Director for Administrative Services/ Physical Plant
Time Frame: Ongoing
Priority: 1
Cost: Staff time

Recommendation 21. Expand stacks maintenance and housekeeping efforts for the general collection.

a. Provide more frequent vacuuming and dusting of books and shelves in the stacks.

Implementation:
Responsibility: Library Administration/Head, Access Services
Time Frame: Ongoing
Priority: 2
Cost: Staff time

b. Provide more book trucks so that materials can be loaded properly and materials are not damaged by falling from the trucks or from being placed on foredges while waiting to be shelved.

Implementation:
Responsibility: Assistant Director for Administrative Services
Time Frame: 1-2 years
Priority: 2
Cost: Medium

c. Monitor collection growth as possible so that books are not shelved so tightly that damage results.

Implementation:
Responsibility: Head, Access Services
Time Frame: Ongoing
Priority: 2
Cost: Staff time

d. Shelve books as loosely as is practicable in order to prevent torn headcaps and dropped volumes.

Implementation:
Responsibility: Head, Access Services
Time Frame: Ongoing
Priority: 1
Cost: Staff time

e. Provide more kick stools in the stacks so that users can remove books from the top and bottom shelves without accidentally tearing spines, or without dropping them on the floor.

Implementation:
Responsibility: Assistant Director for Administrative Services
Time Frame: 1-2 years
Priority: 2
Cost: Medium

f. In adding new shelving, seek shelves and bookends which provide the most adequate support with the least amount of accidental damage.

Implementation:
Responsibility: Assistant Director for Administrative Services/ Head, Access Services
Time Frame: Ongoing
Priority: 1
Cost: To be determined

Recommendation 22. Develop written policies and effective enforcement procedures regarding the use of food, drink, and tobacco in the Library.

a. Place the written policies in the Library Information and Policies Manual.

b. Develop guidelines for staff to follow in enforcing policies.

Implementation:
Responsibility: Assistant Directors: Administrative and Public Services
Time Frame: Immediately
Priority: 1
Cost: Staff time

Recommendation 23. Monitor collections housed in areas where temperature and humidity levels are especially high on an ongoing basis for evidence of mold and fungus damage. Special attention should be given to materials in the Reserve Reading Room.

Implementation:
Responsibility: Conservation Specialist
Time Frame: Ongoing
Priority: 2
Cost: Staff time

Recommendation 24. Monitor stack areas for insect and rodent activity on a regular basis.

Implementation:
Responsibility: Conservation Specialist
Time Frame: Ongoing
Priority: 2
Cost: Staff time

D. Education and Resources

Goal: Educate staff and patrons in preservation issues and proper techniques for handling library materials.

Recommendation 25. Provide education in the conservation/preservation of library materials to all library staff. Such education might include:

a. Presentations on proper handling of library materials for all library staff, either separately or as part of a general orientation program. Visits to the Conservation Laboratory might also be included.

Implementation:
Responsibility: All supervisors
Time Frame: 6 months/ongoing
Priority: 1
Cost: Staff time

b. Regular programs on preservation topics for all library staff.

Implementation:
Responsibility: Conservation Specialist
Time Frame: 6 months/ongoing
Priority: 2
Cost: Staff time

c. Continuing support for staff attendance at meetings and workshops on preservation topics and encouragement for attendees to share information obtained with appropriate library staff.

Implementation:
Responsibility: Dean of Library Services
Time Frame: As necessary/ongoing
Priority: 2
Cost: Medium

Recommendation 26. Establish and coordinate education programs for patrons. Such programs might include:

a. Integration of preservation awareness into existing programs such as the Library Instruction course, graduate seminars, the Term Paper Advisory Service, library tours and class presentations.

Implementation:
Responsibility: Assistant Directors: Administrative and Public Services
Time Frame: 6 months/ongoing
Priority: 2
Cost: Low

b. Informational handouts, bookmarks, posters and displays.

Implementation:
Responsibility: Preservation Coordinating Committee/
Conservation Specialist
Time Frame: 6 months/ongoing
Priority: 2
Cost: Low

c. Handling instructions for patrons using media or print items which require special care.

Implementation:
Responsibility: Assistant Director for Public Services
Time Frame: 6 months/ongoing
Priority: 1
Cost: Staff time

d. An annual article in the ISU Daily and other appropriate publicity in the University News and local newspapers, etc.

Implementation:
Responsibility: Conservation Specialist
Time Frame: Ongoing
Priority: 2
Cost: Staff time

e. Plastic book bags for patron use during inclement weather.

Implementation:
Responsibility: Assistant Director for Public Services
Time Frame: 6 months/ongoing
Priority: 3
Cost: Low or no cost

f. A videotape on preservation to be shown on a continuing basis in a prominent library location at the beginning of each semester.

Implementation:
Responsibility: Conservation Specialist
Time Frame: 1-2 years
Priority: 2
Cost: Low

Recommendation 27. Educate staff and patrons in proper techniques for handling materials.

a. Develop written guidelines specific to each library unit to outline key "do's" and "don'ts."

Implementation:
Responsibility: Department Heads and Conservation Specialist
Time Frame: 6 months - 1 year
Priority: 1
Cost: Staff time

b. Patron education programs should emphasize damage to headcaps caused by improper handling of volumes and damage to bindings caused by photocopying.

Implementation:
Responsibility: Preservation Coordinating Committee
Time Frame: 6 months - 1 year
Priority: 1
Cost: Staff time

Recommendation 28. Discourage mutilation through educational efforts.

a. Educate patrons on an ongoing basis about the serious damage caused by mutilation.

Implementation:
Responsibility: Preservation Coordinating Committee
Time Frame: 6 months - 1 year
Priority: 2
Cost: Staff time

b. Develop a program of faculty outreach which might include information on the effects of various types of library assignments and the possibility of having preservation concerns promoted in classes. The Library Committee, library liaisons, and other appropriate persons should be encouraged to educate academic departments about the serious negative impact certain types of class assignments can have on library materials. When a large number of students is assigned to use a small number of specific items, the assigned materials can often be damaged or misappropriated.

Implementation:
Responsibility: Preservation Coordinating Committee
Time Frame: 1-3 years
Priority: 2
Cost: Staff time

Recommendation 29. Further educate patrons and staff on an ongoing basis about the damage food and beverages can cause to library materials.

Implementation:
Responsibility: Preservation Coordinating Committee
Time Frame: 6 months/ongoing
Priority: 1
Cost: Staff time

Recommendation 30. Provide additional resources for library staff to most effectively carry out preservation-related duties.

a. Continue to add to the Library's already significant collection of print materials concerning preservation and arrange to have receipt of newly-acquired items brought to the attention of appropriate library staff.

Implementation:
Responsibility: Bibliographers/selectors
Time Frame: Ongoing
Priority: 1
Cost: Low

b. Review available educational media materials for suitability to our needs. Consideration should be given to purchase of new items, conversion of slide/tape products to a videotape format and, if necessary, production of original educational materials.

Implementation:
Responsibility: Preservation Coordinating Committee
Time Frame: 1-2 years
Priority: 2
Cost: Low

c. Maintain and update the listing of print and media preservation resources available in the Library, as compiled by the Task Force on Preservation Education and Resources.

Implementation:
Responsibility: Preservation Coordinating Committee
Time Frame: Ongoing
Priority: 2
Cost: Low

d. Continue to monitor developments in photocopier technology. Purchase of an archival photocopier should be considered, as well as defraying a portion of its cost by performing photocopying of rare or fragile materials for other institutions on a fee basis.

Implementation:
Responsibility: Conservation Specialist/Assistant Director for Administrative Services/Photoduplication Supervisor
Time Frame: Ongoing
Priority: 2
Cost: Low cost for monitoring; high cost for purchase

Recommendation 31. Monitor, encourage and participate further as possible in state and regional cooperative preservation efforts.

Implementation:
Responsibility: Library Administration
Time Frame: Ongoing
Priority: 1
Cost: Dependent on level and scope of participation

Recommendation 32. Investigate grant funding for preservation needs.

a. Investigate funding opportunities for upgrading preservation-related equipment, supplies, and physical facilities as well as acquiring or producing preservation educational materials.

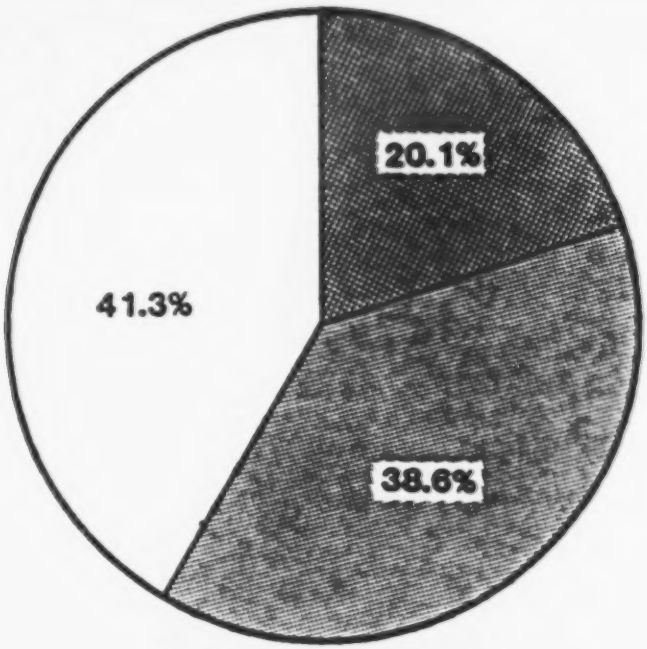
Implementation:
Responsibility: Preservation Coordinating Committee
Time Frame: 1-3 years
Priority: 1
Cost: Staff time

b. Explore sources of grant funding for preservation microfilming, particularly for subject areas in which the Library has unique holdings.

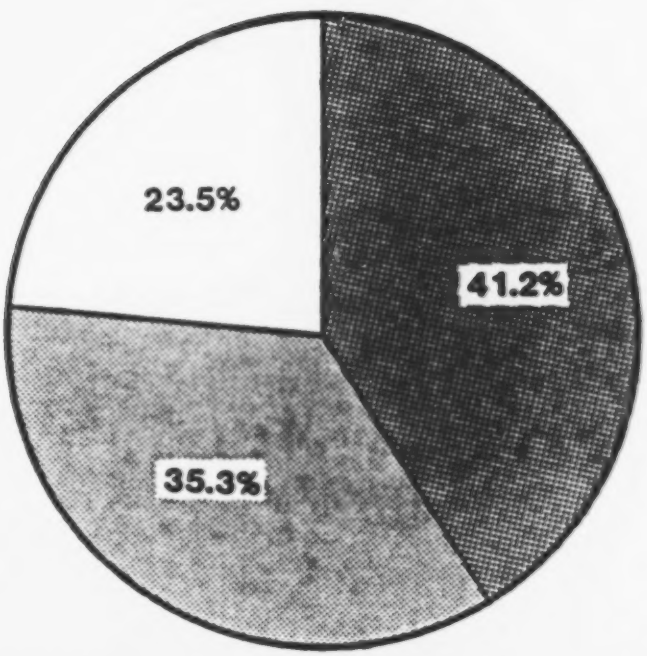
Implementation:
Responsibility: Preservation Coordinating Committee
Time Frame: 1-3 years
Priority: 1
Cost: Staff time

OVERALL CONDITION OF THE COLLECTION

Parks Library



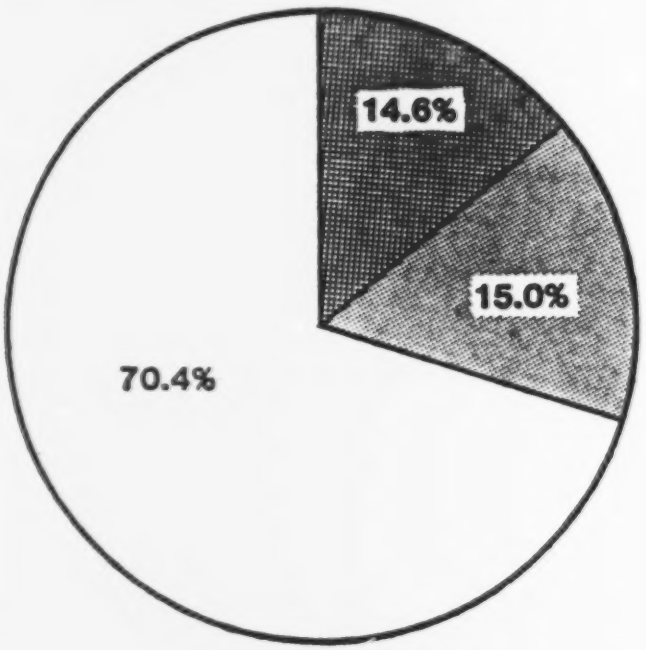
Storage Building



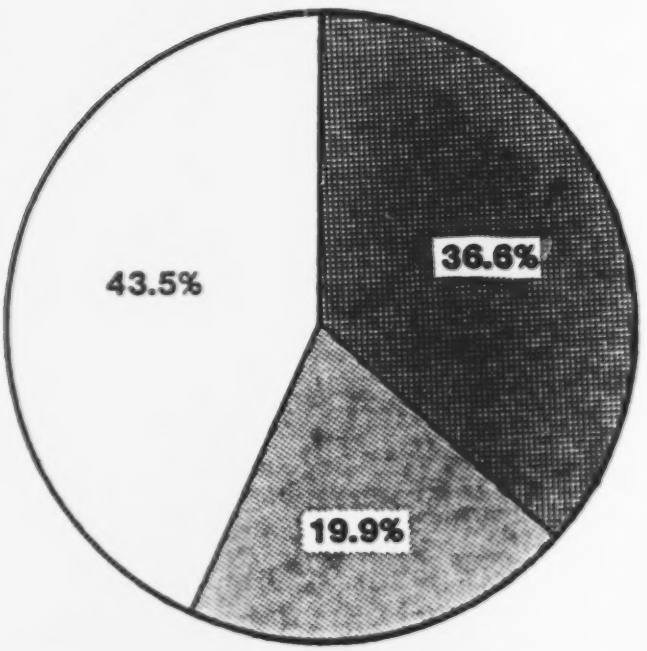
Good Moderate Poor

BRITTLENESS OF THE COLLECTION

Parks Library



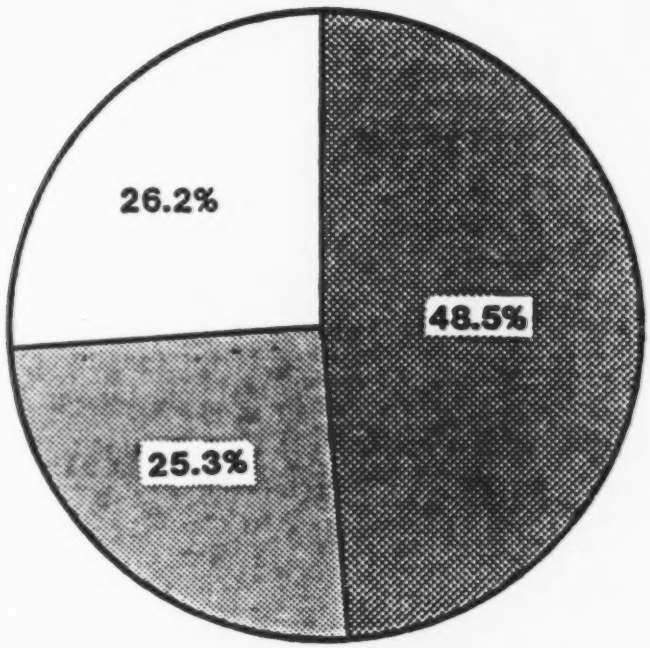
Storage Building



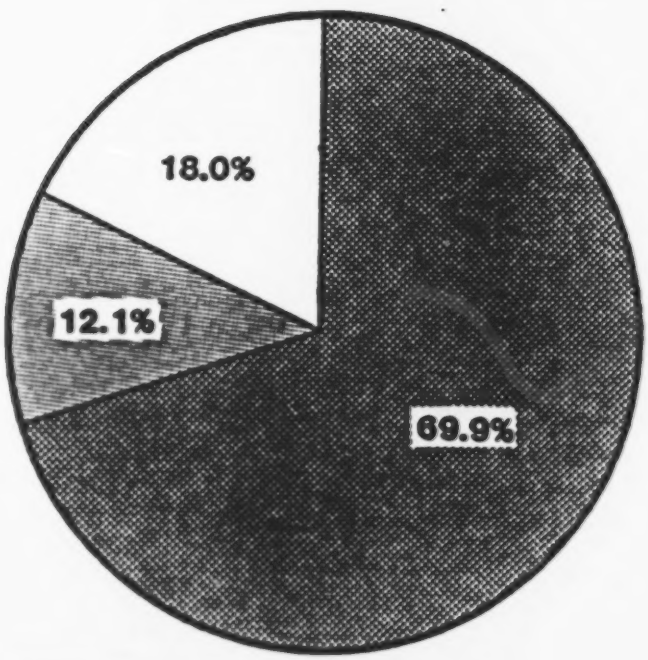
Good Moderate Poor

ACIDITY OF THE COLLECTION

Parks Library



Storage Building



Good Moderate Poor

ACIDITY BY YEAR: PERCENTS

PARKS LIBRARY

	Good	Moderate	Poor	Total
1819 - 1869	25.5% (±19.3%)	16.9% (±16.0%)	57.6% (±18.1%)	100.0%
1870 - 1919	5.4% (±3.4%)	9.5% (±5.0%)	85.1% (±5.7%)	100.0%
1920 - 1945	6.8% (±3.6%)	11.5% (±4.8%)	81.7% (±5.8%)	100.0%
1946 - 1965	23.3% (±4.6%)	21.2% (±4.8%)	55.5% (±5.5%)	100.0%
1966 - 1975	27.0% (±4.6%)	36.5% (±4.9%)	36.5% (±4.9%)	100.0%
1976 - 1986	44.7% (±5.2%)	29.9% (±4.6%)	25.4% (±4.6%)	100.0%
All years	26.2% (±0.02%)	25.3% (±0.02%)	48.5% (±0.03%)	100.0%

MAJOR PHYSICAL CHARACTERISTICS: PERCENTS

	Good	Moderate	Poor	Total
Brittleness				
Parks Library	70.4% (±0.02%)	15.0% (±0.02%)	14.6% (±0.02%)	100.0%
Storage Bldg.	43.5% (±4.3%)	19.9% (±3.4%)	36.6 (±3.9%)	100.0%
Acidity				
Parks Library	26.2% (±0.02%)	25.3% (±0.02%)	48.5% (±0.03%)	100.0%
Storage Bldg.	18.0% (±3.5%)	12.1% (±3.0%)	69.9% (±4.2%)	100.0%
Bindings				
Parks Library	92.9% (±0.01%)	5.6% (±0.01%)	1.5% (±0.01%)	100.0%
Storage Bldg.	90.0% (±2.7%)	8.6% (±2.6%)	1.4% (±0.8%)	100.0%
Boards and covers				
Parks Library	88.0% (±0.02%)	10.4% (±0.02%)	1.6% (±0.01%)	100.0%
Storage Bldg.	88.6% (±2.9%)	9.1% (±2.7%)	2.3% (±1.4%)	100.0%
Mutilation				
Parks Library	86.6% (±0.02%)	10.5% (±0.02%)	2.9% (±0.01%)	100.0%
Storage Bldg.	90.6% (±2.7%)	7.6% (±2.5%)	1.8% (±1.2%)	100.0%
Mold/Fungus				
Parks Library	98.7% (±0.01%)	N/A	1.3% (±0.01%)	100.0%
Storage Bldg.	99.2% (±0.7%)	N/A	0.8% (±0.7%)	100.0%
Insect/Rodent				
Parks Library	99.8% (±0.002%)	N/A	0.2% (±0.002%)	100.0%
Storage Bldg.	99.4% (±0.7%)	N/A	0.6% (±0.7%)	100.0%

ADDITIONAL PHYSICAL CHARACTERISTICS: PERCENTS

	Not present	Present	Total
Torn headcap			
Parks Library	93.1% (±1.4%)	6.9% (±1.4%)	100.0%
Storage Building	92.5% (±2.4%)	7.5% (±2.4%)	100.0%
Previous repair			
Parks Library	96.4% (±1.0%)	3.6% (±1.0%)	100.0%
Storage Building	93.4% (±2.2%)	6.6% (±2.2%)	100.0%
Photocopied replacement pages			
Parks Library	99.6% (±0.3%)	0.4% (±0.3%)	100.0%
Storage Building	99.5% (±0.6%)	0.5% (±0.6%)	100.0%
Foxing			
Parks Library	97.1% (±0.8%)	2.9% (±0.8%)	100.0%
Storage Building	92.1% (±2.6%)	7.9% (±2.6%)	100.0%

PARKS LIBRARY ENVIRONMENTAL READINGS